

Environmental Protection Agency

Pt. 53, Subpt. A, Table A-1

TABLE A-1 TO SUBPART A OF PART 53—SUMMARY OF APPLICABLE REQUIREMENTS FOR REFERENCE AND EQUIVALENT METHODS FOR AIR MONITORING OF CRITERIA POLLUTANTS

Pollutant	Ref. or equivalent	Manual or automated	Applicable part 50 appendix	Applicable subparts of part 53					
				A	B	C	D	E	F
SO <sub>2</sub>	Reference	Manual	A						
	Equivalent	Manual	✓	✓					
		Automated	✓	✓	✓				
CO	Reference	Manual	C	✓	✓				
	Equivalent	Manual	✓	✓					
		Automated	✓	✓	✓				
O <sub>3</sub>	Reference	Manual	D	✓	✓				
	Equivalent	Manual	✓	✓					
		Automated	✓	✓	✓				
NO <sub>2</sub>	Reference	Manual	F	✓	✓				
	Equivalent	Manual	✓	✓					
		Automated	✓	✓	✓				
Pb	Reference	Manual	G	✓					
	Equivalent	Manual	✓	✓					
		Automated	✓	✓	✓				
PM <sub>10</sub>	Reference	Manual	J	✓	✓				
	Equivalent	Manual	✓	✓	✓				
		Automated	✓	✓	✓				
PM <sub>2.5</sub>	Reference	Manual	L	✓	✓				
	Equivalent Class I	Manual	L	✓	✓	✓			
		Automated	L <sup>1</sup>	✓	✓ <sup>2</sup>	✓	✓ <sup>1,2</sup>		
PM <sub>10-2.5</sub>	Reference	Manual	L <sup>1</sup>	✓	✓	✓ <sup>1</sup>	✓ <sup>1</sup>		
	Equivalent Class II	Manual	O <sup>2</sup>	✓	✓				
		Automated	O <sub>2</sub>	✓	✓				
PM <sub>10-2.5</sub>	Reference	Manual	O <sup>2</sup>	✓	✓ <sup>2</sup>	✓ <sup>1</sup>	✓ <sup>1,2</sup>		
	Equivalent Class III	Manual	L <sup>1</sup> , O <sup>1,2</sup>	✓	✓ <sup>1</sup>	✓ <sup>1</sup>	✓ <sup>1</sup>		
		Automated		✓					

<sup>1</sup> Some requirements may apply, based on the nature of each particular candidate method, as determined by the Administrator.

<sup>2</sup> Alternative Class III requirements may be substituted.

[71 FR 61276, Oct. 17, 2006]

EFFECTIVE DATE NOTE: At 75 FR 35597, June 22, 2010, table A-1 to subpart A was revised, effective Aug. 23, 2010. For the convenience of the user, the revised text is set forth as follows:

TABLE A-1 TO SUBPART A OF PART 53—SUMMARY OF APPLICABLE REQUIREMENTS FOR REFERENCE AND EQUIVALENT METHODS FOR AIR MONITORING OF CRITERIA POLLUTANTS

Pollutant	Reference or equivalent	Manual or automated	Applicable part 50 appendix	Applicable subparts of part 53					
				A	B	C	D	E	F
SO <sub>2</sub>	Reference	Manual	A-2						
	Equivalent	Automated	A-1	✓	✓				
		Manual	A-1	✓		✓			
CO	Reference	Manual	A-1	✓	✓	✓			
	Equivalent	Automated	C	✓	✓				
		Manual	C	✓	✓	✓			
O <sub>3</sub>	Reference	Manual	D	✓	✓	✓			
	Equivalent	Manual	D	✓	✓				
		Automated	D	✓	✓	✓			
NO <sub>2</sub>	Reference	Manual	F	✓	✓				
	Equivalent	Manual	F	✓		✓			
		Automated	F	✓	✓	✓			
Pb	Reference	Manual	G	✓					
	Equivalent	Manual	G	✓		✓			
		Automated	G	✓		✓			
PM <sub>10-Pb</sub>	Reference	Manual	Q	✓					
	Equivalent	Manual	Q	✓		✓			
		Automated	Q	✓		✓			
PM <sub>10</sub>	Reference	Manual	J	✓			✓		
	Equivalent	Manual	J	✓		✓	✓		
		Automated	J	✓		✓	✓		
PM <sub>2.5</sub>	Reference	Manual	L	✓				✓	
	Equivalent Class I	Manual	L	✓		✓		✓	
		Automated	L <sup>1</sup>	✓		✓ <sup>2</sup>		✓	✓ <sup>1,2</sup>

Pollutant	Reference or equivalent	Manual or automated	Applicable part 50 appendix	Applicable subparts of part 53					
				A	B	C	D	E	F
PM <sub>10-2.5</sub> ....	Equivalent Class III .....	Automated .....	L <sup>1</sup>	✓		✓		✓	✓ <sup>1</sup>
	Reference .....	Manual .....	L, O	✓				✓	
	Equivalent Class I .....	Manual .....	L, O	✓		✓		✓	
	Equivalent Class II .....	Manual .....	L, O	✓		✓ <sup>2</sup>		✓	✓ <sup>1 2</sup>
	Equivalent Class III .....	Automated .....	L <sup>1</sup> , O <sup>1</sup>	✓		✓		✓	✓ <sup>1</sup>

1. Some requirements may apply, based on the nature of each particular candidate method, as determined by the Administrator.

2. Alternative Class III requirements may be substituted.

#### APPENDIX A TO SUBPART A OF PART 53— REFERENCES

(1) American National Standard Quality Systems—Model for Quality Assurance in Design, Development, Production, Installation, and Servicing, ANSI/ISO/ASQC Q9001–1994. Available from American Society for Quality, P.O. Box 3005, Milwaukee, WI 53202 (<http://qualitypress.asq.org>).

(2) American National Standard Quality Systems for Environmental Data and Technology Programs—Requirements with guidance for use, ANSI/ASQC E4–2004. Available from American Society for Quality P.O. Box 3005, Milwaukee, WI 53202 (<http://qualitypress.asq.org>).

(3) Dimensioning and Tolerancing, ASME Y14.5M–1994. Available from the American Society of Mechanical Engineers, 345 East 47th Street, New York, NY 10017.

(4) Mathematical Definition of Dimensioning and Tolerancing Principles, ASME Y14.5.1M–1994. Available from the American Society of Mechanical Engineers, 345 East 47th Street, New York, NY 10017.

(5) ISO 10012, Quality Assurance Requirements for Measuring Equipment—Part 1: Meteorological confirmation system for measuring equipment):1992(E). Available from American Society for Quality Control, 611 East Wisconsin Avenue, Milwaukee, WI 53202.

(6) Quality Assurance Guidance Document 2.12. Monitoring PM<sub>2.5</sub> in Ambient Air Using Designated Reference or Class I Equivalent Methods. U.S. EPA, National Exposure Research Laboratory, Research Triangle Park, NC, November 1998 or later edition. Currently available at <http://www.epa.gov/ttn/amtic/pmqaainf.html>.

[62 FR 38784, July 18, 1997, as amended at 71 FR 61278, Oct. 17, 2006]

#### Subpart B—Procedures for Testing Performance Characteristics of Automated Methods SO<sub>2</sub>, CO, O<sub>3</sub>, and NO<sub>2</sub>

##### § 53.20 General provisions.

(a) The test procedures given in this subpart shall be used to test the per-

formance of candidate automated methods against the performance specifications given in table B–1. A test analyzer representative of the candidate automated method must exhibit performance better than, or equal to, the specified value for each such specification (except Range) to satisfy the requirements of this subpart. Except as provided in paragraph (b) of this section, the range of the candidate method must be the range specified in table B–1 to satisfy the requirements of this subpart.

(b) For a candidate method having more than one selectable range, one range must be that specified in table B–1 and a test analyzer representative of the method must pass the tests required by this subpart while operated in that range. The tests may be repeated for a broader range (i.e., one extending to higher concentrations) than that specified in table B–1 provided that the range does not extend to concentrations more than two times the upper range limit specified in table B–1. If the application is for a reference method determination, the tests may be repeated for a narrower range (one extending to lower concentrations) than that specified in table B–1.

If the tests are conducted or passed only for the specified range, any reference or equivalent method determination with respect to the method will be limited to that range. If the tests are passed for both the specified range and a broader range (or ranges), any such determination will include the broader range(s) as well as the specified range, provided that the tests required by subpart C of this part (if applicable) are met for the broader range(s). If the tests are passed for both the specified range and a narrower